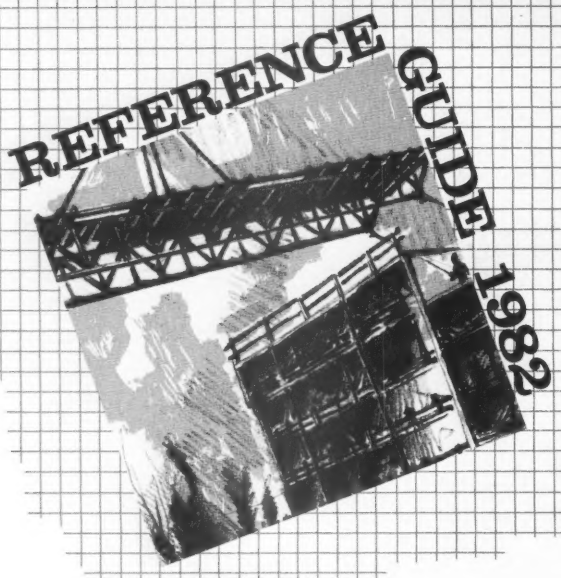


CONCRETE CONSTRUCTION

Annual index of articles: 1981

ADMIXTURES

Superplasticizer Speeds Baltimore Metro Toward Completion: The specific problems of two different contractors were solved by adding a superplasticizer to the concrete mixes, and there were additional advantages: cement requirement was reduced and strength development was accelerated. **1 p; 81:907**

AGRICULTURAL USES

Promoting the Farm Market: In the United States agricultural buildings reportedly cost more than $10 billion each year. No matter what percentage of this is concrete, it represents a substantial market. You can show the farmer how paved concrete feedlots or other concrete installations enhance profits. **3 pp; 81:465**

Horizontal Concrete Silos: Horizontal silos above or below ground provide the cheapest way to store and use silage on the farm. Tilt-up construction using locally produced ready mixed concrete makes them a practical reality for the farm builder. Details of construction are offered. **3 pp; 81:471**

Concrete Walls Strengthen Post-frame Farm Buildings: Typical 4-foot-high walls are easy to form. These sanitary, durable walls in combination with post-frame construction provide a rugged structure that withstands the hard blows of machinery and livestock. **2 pp; 81:477**

Hog-pen Dividers Can Be Cast in Place: Multiple-blockout polyvinyl inserts for forms make it possible to cast concrete dividers in place in new or existing buildings. **3 pp; 81:479**

Information Resources for the Farm Builder: A listing of books, bulletins, movies, slides, standard plans and design tables available from many sources. **3 pp; 81:485**

Ontario Ready Mixed Concrete Association Pursues Farm Market: The association successfully exhibited a partially erected, tilt-up construction hog finishing barn at the International Plowing Match. The various stages of construction were clearly visible, including a partly finished wall panel cast on the floor slab. **2 pp; 81:499**

ARCHITECTURAL CONCRETE

Update Arcosanti: The six shapes of Paolo Soleri's vision of a city of the future, located in Arizona, are described and pictured. Some construction methods are discussed. **4 pp; 81:323**

Concrete Veneer Duplicates 1929 Masonry: A cost-efficient method of replicating Frank Lloyd Wright's custom designed decorative concrete blocks for the Arizona Biltmore Hotel. **2 pp; 81:495**

Sculptor Models Unique Concrete Home: A waterfront dwelling on a steep, rocky site has slopes and angles, cantilevers and a spiral concrete staircase. The structure was contracted on a cost-plus basis, since local builders had never done a job such as this before. **2 pp; 81:682**

ASSOCIATIONS

Concrete Industry Organizations: Addresses and phone numbers of national, international, state, regional and local organizations involved in the concrete construction industry. **4 pp; 81:1003**

CEMENT

Special Cements for Special Concretes: Introduction to the properties and uses of blended hydraulic cements, cements with special setting and hardening properties, cements with special colors, masonry cements, water-repellent cements and expansive cements. **5 pp; 81:331**

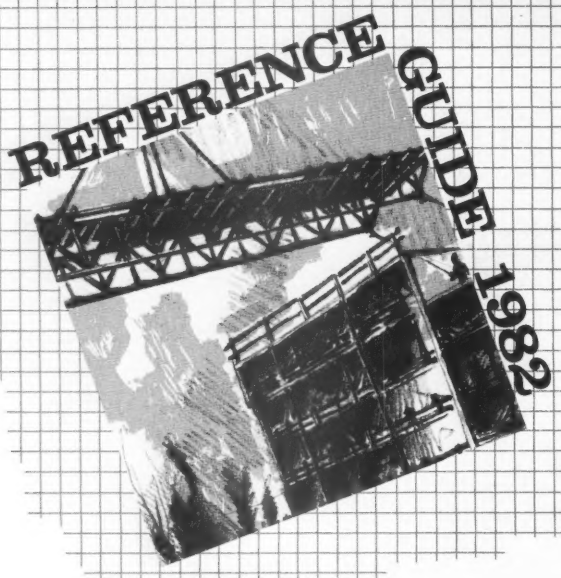
Fuel Saved in Manufacture of New Slag Cement: High sulfate slag cement manufacturing technology recently developed in Japan reportedly indicates that capital investment required for manufacture is about a third of that needed for a portland cement plant of similar capacity. Performance characteristics of the slag cement are noted. **1 p; 81:347**

COATINGS

Surface Preparation of Concrete for Paints and Coatings: The cost of good surface preparation of materials to be covered is only a fraction of the installed cost of the barrier system. Provide a barrier system with a proper foundation so it can do the job it is capable of doing. Many explicit details are given. **5 pp; 81:401**

A Catalog of Decorative Barrier Coatings for Concrete: The characteristics and capabilities of 13 decorative or protective coatings are described, in generic terms: latex emulsions, water-based portland cement paints, alkyds,

(more)



CONCRETE CONSTRUCTION

Annual index of articles: 1981

ADMIXTURES

Superplasticizer Speeds Baltimore Metro Toward Completion: The specific problems of two different contractors were solved by adding a superplasticizer to the concrete mixes, and there were additional advantages: cement requirement was reduced and strength development was accelerated. **1 p; 81:907**

AGRICULTURAL USES

Promoting the Farm Market: In the United States agricultural buildings reportedly cost more than $10 billion each year. No matter what percentage of this is concrete, it represents a substantial market. You can show the farmer how paved concrete feedlots or other concrete installations enhance profits. **3 pp; 81:465**

Horizontal Concrete Silos: Horizontal silos above or below ground provide the cheapest way to store and use silage on the farm. Tilt-up construction using locally produced ready mixed concrete makes them a practical reality for the farm builder. Details of construction are offered. **3 pp; 81:471**

Concrete Walls Strengthen Post-frame Farm Buildings: Typical 4-foot-high walls are easy to form. These sanitary, durable walls in combination with post-frame construction provide a rugged structure that withstands the hard blows of machinery and livestock. **2 pp; 81:477**

Hog-pen Dividers Can Be Cast in Place: Multiple-blockout polyvinyl inserts for forms make it possible to cast concrete dividers in place in new or existing buildings. **3 pp; 81:479**

Information Resources for the Farm Builder: A listing of books, bulletins, movies, slides, standard plans and design tables available from many sources. **3 pp; 81:485**

Ontario Ready Mixed Concrete Association Pursues Farm Market: The association successfully exhibited a partially erected, tilt-up construction hog finishing barn at the International Plowing Match. The various stages of construction were clearly visible, including a partly finished wall panel cast on the floor slab. **2 pp; 81:499**

ARCHITECTURAL CONCRETE

Update Arcosanti: The six shapes of Paolo Soleri's vision of a city of the future, located in Arizona, are described and pictured. Some construction methods are discussed. **4 pp; 81:323**

Concrete Veneer Duplicates 1929 Masonry: A cost-efficient method of replicating Frank Lloyd Wright's custom designed decorative concrete blocks for the Arizona Biltmore Hotel. **2 pp; 81:495**

Sculptor Models Unique Concrete Home: A waterfront dwelling on a steep, rocky site has slopes and angles, cantilevers and a spiral concrete staircase. The structure was contracted on a cost-plus basis, since local builders had never done a job such as this before. **2 pp; 81:682**

ASSOCIATIONS

Concrete Industry Organizations: Addresses and phone numbers of national, international, state, regional and local organizations involved in the concrete construction industry. **4 pp; 81:1003**

CEMENT

Special Cements for Special Concretes: Introduction to the properties and uses of blended hydraulic cements, cements with special setting and hardening properties, cements with special colors, masonry cements, water-repellent cements and expansive cements. **5 pp; 81:331**

Fuel Saved in Manufacture of New Slag Cement: High sulfate slag cement manufacturing technology recently developed in Japan reportedly indicates that capital investment required for manufacture is about a third of that needed for a portland cement plant of similar capacity. Performance characteristics of the slag cement are noted. **1 p; 81:347**

COATINGS

Surface Preparation of Concrete for Paints and Coatings: The cost of good surface preparation of materials to be covered is only a fraction of the installed cost of the barrier system. Provide a barrier system with a proper foundation so it can do the job it is capable of doing. Many explicit details are given. **5 pp; 81:401**

A Catalog of Decorative Barrier Coatings for Concrete: The characteristics and capabilities of 13 decorative or protective coatings are described, in generic terms: latex emulsions, water-based portland cement paints, alkyds,

(more)

chlorinated rubbers, phenolics, acrylics, oil-modified urethanes, vinyls, urethane prepolymers, catalyzed epoxies, epoxy esters, two-component urethanes, and polyesters. **6 pp; 81:406**

CRACKING

Cracks in Concrete, Part I: Deals with the process of cracking, the relationship between it and drying shrinkage, and enumerates factors that affect cracking. **4 pp; 81:725**

Cracks in Concrete, Part II: Discusses which cracks are objectionable, what various kinds of cracks can show about the concrete, and use of prestressing as a preventive step. Ten commandments are given for prevention and control of cracking. **2 pp; 81:733**

(These two articles are an update of one published in CONCRETE CONSTRUCTION, *April 1964.)*

Why Concrete Columns Can Crack: Possible explanations are tension, creep behavior and stress redistribution. **1 p; 81:737**

How to Minimize Cracking and Increase Strength of Slabs on Grade: Tests indicate that removal of excess water from the bottom of a slab as fast as or faster than it is removed from the top will densify plastic concrete and allow little tensile stress to build up during early curing. **3 pp; 81:739**

CUTTING AND GRINDING

Taking the Tedium Out of Cutting: Sawing, drilling, grooving, grinding and flame cutting can accomplish new kinds of jobs. **4 pp; 81:49**

DEMOLITION

Reinforced Concrete Structure Resists Dynamiting: An earthquake-damaged 6-story building in California withstood 60 pounds of dynamite and a second milder earthquake. **2 pp; 81:132**

DESIGN

Build It Right and Minimize Costly Repairs: Some critical aspects of design, specifications, construction methods, inspection and maintenance are examined. **2 pp; 81:7**

What Every Floor Designer Should Know About Concrete: If an owner knows what he needs in a floor on grade, he can plan and specify the requirements realistically so the floor performs as intended. Here are some basic facts about concrete that cannot be overlooked for crack-free, durable floors. **4 pp; 81:117**

What to Specify for Successful Commercial and Industrial Floors on Grade: Don't overlook needed requirements or make specifications too strict. A table of classifications for commercial-industrial floors is provided. **4 pp; 81:125**

DETERIORATION OF CONCRETE

Preventive Maintenance: There are situations where a little periodic maintenance will greatly extend concrete's useful life. Schedule some attention to surfaces and joints to save future trouble. **3 pp; 81:9**

Identifying Concrete Deterioration: A dozen photos and descriptions help make diagnosis possible. Some secrets for assuring lasting repairs are offered. **5 pp; 81:13**

Steel Corrosion Damage on Vertical Concrete Surfaces
Part I: Causes of corrosion damage and tests for analyzing the extent of visible and unseen damage.
Part II: Repair and restoration, including surface preparation, checks of condition of reinforcement and a table of repair materials. **7 pp; 81:91**

EARTH-SHELTERED CONSTRUCTION

Post-tensioning: It Makes Sense for Earth-sheltered Homes: Loads on earth-sheltered buildings may be as much as for a conventional 4- or 5-story building, and hence the structure must be designed accordingly. Post-tensioning prevents cracking, helps prevent leaks, and saves concrete and steel. **3 pp; 81:105**

ENERGY CONSERVATION

Solar-heated and Earth-sheltered Structures Can be Beautiful: A new Canton, Ohio library is thought to be the twelfth largest solar heated and cooled structure in the country. **2 pp; 81:145**

FAILURES

Failures During and After Construction: Case histories of concrete structure failures. We must learn from the past in order to identify and avoid both design and construction failures. Basic rules for preventing construction failures are offered. **5 pp; 81:641**

FERROCEMENT

Ferrocement in Construction: The economic considerations are different in industralized countries from those in developing countries, with labor costs versus materials costs often determining what is feasible in one country but not in another. **3 pp; 81:269**

FIBER-REINFORCED CONCRETE

Fiber Reinforced Concretes: Improved tensile strength is made possible by addition of discontinuous fibers of glass, steel, asbestos and other materials. A table showing typical fiber properties is included. **5 pp; 81:261**

Glass Fibers Control Surface Cracking in Concrete Beams: Favorable test results are reported with the use of a surface layer of glass fiber reinforced cement to improve serviceability behavior of large beams. **1 p; 81:846**

FIRE ENDURANCE

Test Method for Fire-damaged Concrete: Staff members at Paisley College of Technology in Scotland believe a thermoluminescence technique, used heretofore for determining the age of artifacts, may become a standard test for fire-damaged concrete. **1 p; 81:609**

FLOORS

Repairing and Protecting with Acrylic Resin Materials: These resins are used for floors in need of renovation or on new floors where special finishes are required. **1 p; 81:55**

Long-strip Construction Preferred for Slabs on Ground: The widely held belief that the checkerboard system of placing floors will eliminate or minimize shrinkage cracking is a fallacy, according to studies performed by the Portland Cement Association. **1 p; 81:745***

Making Floors Pass the Test: Suggestions are made regarding the responsibilities of the various people or groups involved in floor construction: design engineer, owner, inspector, general contractor, subcontractor. **2 pp; 81:934**

FORMING

Innovative Forming Keeps Hospital Operating Room in Action: False floor framing to protect existing hospital surgical ward during remodeling saved shutdown of this vital area. **1 p; 81:690**

Skip Joist Forming Takes Twin Towers to Concrete: How a lean redesign in concrete replaced the structural steel design originally planned. Sketches illustrate the skip-joist system. **3 pp; 81:883**

FORMS AND FORMING MATERIALS

Side Form Spacers: Plastic, concrete, wood and other spacers offer affirmative action to maintain needed concrete cover over reinforcing bars. **2 pp; 81:825**

FOUNDATIONS

House Foundation Failure: Settling or Heaving?: Settlement occurs when loadbearing soil has inadequate density or when soil shrinks due to decreased moisture content. Heaving occurs when soil expands due to

* See erratum at end of Index.

increases in moisture content. Diagrams illustrate the two situations, and some remedies are suggested. **4 pp; 81:659**

HISTORY

Indonesian Batch Plant: Describes the crew and equipment being used in the construction of Jakarta's first apartment complex. The heart of a typical batch plant is a conventional one-sack gasoline gravity mixer fed by manual labor. **2 pp; 81:597**

Silver Anniversaries Observed by Interstate Highway System and CONCRETE CONSTRUCTION Magazine: **2 pp; 81:753**

History and Heritage: The work of both the Concrete Reinforcing Steel Institute, now in its 57th year, and the Wire Reinforcement Institute, now in its 50th year, is noted. History of welded wire fabric development is reviewed. **2 pp; 81:830**

History and Heritage: Our nation's newest cultural institution—the National Building Museum in Washington, D.C. **1 p; 81:910**

Landmarks in the History of Concrete: Brief discussions of some of the industry's most notable achievements since ancient times. **15 pp; 81:1024**

INSULATING CONCRETE

Low Density Concretes: These are used for insulation and fill. They may weigh as little as 12 to 15 pounds per cubic foot and may have compressive strengths as low as or lower than 5 psi. Mixes may include foam (for cellular concrete), perlite, vermiculite, or expanded polystyrene beads. **3 pp; 81:253**

JOINTS

Expansion Joints in Post-tensioned Parking Structures: A first requirement is proper design and construction details; thereafter, regular in-service inspection can prevent distress. Important causes of failure are inadequate sealing, spalled slab bearings and insufficient concrete cover over tendon anchors. **2 pp; 81:651**

LIFT SLAB

International Development with Second Generation Lift Slab: The earthquake survival record of these lift slab structures continues to grow. Update of an article in CONCRETE CONSTRUCTION, February 1977, shows modifications in lifting equipment, slab thicknesses, formwork and architectural style. **4 pp; 81:717**

LIGHTWEIGHT CONCRETE

Structural Lightweight Concrete: The data cover concretes weighing 85 to 120 pounds per cubic foot and having compressive strengths as high as 6000 psi. The types include concretes containing various lightweight aggregates and some with normal-weight sand. **3 pp; 81:247**

MARKETING

High-rise Office Building Package: Lessons from experience in marketing innovative forms and development of a complete service including building design, construction and financing. **3 pp; 81:877**

Develop An Effective Marketing Plan for Your Construction Company: Step-by-step instructions are given for developing the plan; an example is provided. **4 pp; 81:889**

Construction Time and Front-end Investment Affect Selection of Concrete for High-rise Offices: A Portland Cement Association survey revealed the most important factors in selecting the framing material. **2 pp; 81:896**

Parking Lot Promotion Increases Contractor Profit: A look at several factors that are required for or can at least contribute to a successful marketing campaign. **2 pp; 81:901**

Overseas Marketing for World of Concrete Exhibitors Through Videotape-Catalog Shows: A sales presentation of one or two export-oriented products can be made live at booths for subsequent showing at trade shows abroad. The service is a joint effort of World of Concrete and the United States Department of Commerce. **1 p; 81:911**

MIX DESIGN

Special Concretes: An overview of the most important special concretes currently in use: high strength; flowing; special aggregate; fly ash; structural lightweight; shrinkage compensating; colored; dampproofed; heavyweight (high density); steel fiber reinforced; latex modified; cellular. **8 pp; 81:229**

High-strength Concrete, Chicago Style: The features considered include mix design, physical properties, quality control, structural and economic considerations, applications. All data refer only to 9000-psi normal weight concrete. **3 pp; 81:241**

PAVING

First CRC Track Slabs in U.S.: Long Island Railroad constructs first continuously reinforced concrete track slabs to replace conventional crossties and ballast. **2 pp; 81:212**

Massive Concrete Placement at Vandenberg Launch Site: Reports dimensions, materials requirements and problems in placement of concrete due to heavy reinforcement. Delivery and placement techniques are noted. **2 pp; 81:606**

Concrete Pavement: An Answer to the Dwindling Petroleum Supply: Discusses the fallacy inherent in spreading petroleum resources onto our roads when a better concrete pavement is cost-effective. **2 pp; 81:657**

Glare Screen Adds Safety to Busy Expressways: In Atlanta, Georgia, concrete glare screens were slipformed atop previously installed median barriers to shield motorists from oncoming automobile headlights. **1 p; 81:667**

PRESTRESSING

Segmental Bridges: the Best in the Business: Outlines multitude of choices for casting and erecting these bridges, which permit each contractor to tailor the project to his manpower and equipment to maximize efficiency. **5 pp; 81:135**

Prestressing Improves Concrete's Competitive Advantage: Longer spans with heavier loads and control of cracking are possible with either pretensioned or post-tensioned members. Prestressed concrete has become a major competitor to structural steel over the full range of spans. **3 pp; 81:235**

PUMPING

Concrete Hotizontal Pumping Distance Record Claimed: A single pump was used to deliver concrete through a 3470-foot horizontal pipeline near Hagersville, Ontario. **1 p; 81:612**

QUALITY CONTROL

Getting the Most for Your Quality Control Dollar: The expense of hiring a testing laboratory is small in relation to the total cost of construction. It is also small compared to financial losses that may occur if testing isn't done. Recommendations are offered for selecting a competent testing laboratory. **2 pp; 81:591**

RECYCLING

New Life for Old Buildings: The very qualities that have made concrete the most widely used of all building materials also make it in the long run the most economical to restore. Considerations include the high cost of new construction, evaluation of a structure to be renovated, choice of repair method, paints and coatings for repair enhancement, and the hidden beauty of some older structures. **3 pp; 81:373**

(more)

From Abandoned Silos to Luxury Hotel: In Akron, Ohio, former oatmeal mill silos were transformed into a 200-room luxury hotel through imaginative use of saw cutting and reconstruction. **3 pp; 81:385**

Concrete in the Redevelopment of St. Katharine Docks: Extensive use of concrete transformed a derelict dockland near London's famous Tower Bridge and Tower of London into a popular business, residential and leisure environment. **3 pp; 81:395**

REINFORCEMENT

Estimating Reinforcing Bars: Of the many variables inherent in estimating, the following are explained briefly: extras added to base price, lap splices, butt splices, anchorages, column ties and bar supports. **5 pp; 81:793**

Welded Wire Fabric: Concrete reinforcement with a new look is possible with variable wire spacing and special custom benders. **3 pp; 81:803**

Welded Splices of Reinforcing Bars: Properly engineered and constructed welded splices require more consideration than a simple statement in contracts regarding compliance with code regulations. Important items beyond the scope of a code are discussed and illustrated. **4 pp; 81:807**

Guidance for Engineers and Rebar Detailers: This is a comprehensive review of *ACI Detailing Manual—1980,* which sets forth clearly the responsibilities of the structural designer and those of the reinforcing bar fabricator. **2 pp; 81:815**

Reinforcing Bar Specifications: Information is provided on the current (1981) specifications for reinforcing bars as published by the American Society for Testing and Materials. **3 pp; 81:819**

REPAIRING

Basic Concrete Repair: Don't undertake repairs without understanding requirements for surface preparation, materials, placing, curing. **2 pp; 81:21**

Repair Techniques and Materials: This article gives an overview of basic repair techniques and materials most frequently used in concrete restoration. Forty-three references lead to more detailed information if it is needed, and a selection guide to repair techniques and materials is provided. **10 pp; 81:31**

Workman, Spare That Slab: Slabjacking often serves as an alternative to demolition of settled slabs. It is cleaner, faster and usually less costly than applying an overlay. **4 pp; 81:147**

Shotcrete for Building Repairs: Dry-mix and wet-mix shotcrete are explained, as are the major differences between shotcrete and ordinary concrete. Attention is given to materials and proportioning of mixtures, preparation of surfaces for repair, batching, placement techniques, finishing, curing, quality control, and durability. **3 pp; 81:379**

Getting Ready for Concrete Repairs: For the success of any patching, restoration or overlaying of concrete, proper surface preparation should include removal of unsound concrete and thorough cleaning. Bonding of epoxy resin patching systems requires specific preparation; some details are given. **2 pp; 81:391**

If the Wall Leaks, Here's How to Repair It Effectively and Permanently: A picture portfolio with explanatory captions illustrates the method one successful contractor uses. **3 pp; 81:419**

Renovation/Repair References: This is a compilation of 19 references from which detailed information can be obtained. **2 pp; 81:427**

Simplified Repair of Wall Cracks: A system based on injection of epoxy resin into cracks in residential basement walls and other small structures is pictured and described. **2 pp; 81:491**

(more)

Water Jet Contributes to Economy of Road Repairs: A demonstration of a 110-horsepower water jet (40,000 psi pressure), showed it to be a faster, cleaner, safer and more economical method of cutting highway concrete. **1 p; 81:605**

SAFETY

Checklist for Safe Construction of Formwork: A seasoned contractor shares his checklist for safe formwork—just one of many avenues to improved concrete construction. **3 pp; 81:111**

Changes for BOCA's Basic Building Code: Of the more than 200 change proposals scheduled for consideration in 1981, most of those endorsed concerned safety of some type. **1 p; 81:342**

TESTING

Control Checks on Fresh Concrete: Tests can help maintain quality only when properly performed. Procedures are given for the following tests: slump, air content, unit weight, temperature. Frequency of testing is discussed. **4 pp; 81:557**

What to Do When Cylinder Breaks Are Low: Three aspects of concrete strength evaluation are considered: (1) When is further investigation justified? (2) How should it be performed? (3) How should results be translated into action with respect to the structure and to allocation of costs? **4 pp; 81:563**

Rebound, Penetration Resistance and Pulse Velocity Tests for Testing in Place: The tests described are relatively simple to perform but analysis and interpretation of data must always be done by specialists in this field rather than by technicians performing the tests. **3 pp; 81:571**

Pullout Testing of Concrete: A cast-in-place device makes it possible to evaluate concrete in a structure with only minor damage. Test procedure and its correlation with cylinder test results are described. **4 pp; 81:577**

Petrographer: New Man on the Construction Team: Petrography, literally a "rock picture" usually based on microscopic studies, can help the design and construction team in determining the characteristics and quality of aggregate. Petrography is also used when repairs must be made and types of aggregate are critical, or when causes of structural failures must be determined. **3 pp; 81:585**

Voluntary Accreditation for Concrete Producer's Lab: The accreditation program calls for an all-out commitment to equipment upgrading, personnel training and spending additional time required for paperwork under the program. **2 pp; 81:601**

Accelerated Strength Testing: Dependable compressive strength measurements can be obtained in one or two days instead of the usual 28 by procedures of ASTM C 684. The three methods are described. **2 pp; 81:665**

Contractor-made Test Cylinders: Contractors who make their own test cylinders have the advantage of lower cost and convenience, but personnel who make the cylinders should know and follow ASTM C 172 (sampling procedures) and ASTM C 31 (making and curing test specimens in the field). **3 pp; 81:669**

TILT-UP

Industrial Plants Beginning to Tilt Up All Over the Nation: Some of the reasons are speed, economy, design freedom, and potential for energy conservation. **2 pp; 81:53***

* See erratum at end of Index.

TOLERANCES

ACI Ballots on Proposed Standard Construction Tolerances for Concrete: The proposed standard is a subject of controversy among contractors. **1 p; 81:364**

Can Your Floors Pass This Test?: This discussion of floor tolerances indicates that there isn't much information of how smooth a floor must be in order to meet the owner's expectations. The "corn flakes test" and the "sugar test" show requirements for food warehouses. **2 pp; 81:512**

The Floor Tolerance Conundrum: What existing tolerance requirements mean, how often a builder meets them. Four recommendations are given for improved clarity of specifications for floor tolerances. **3 pp; 81:673**

TROUBLESHOOTING

Troubleshooting Index: An illustrated index to information for diagnosing, correcting and preventing common problems with concrete. **17 pp; 81:980**

VACUUM DEWATERING

A Vacuum Dewatering Demonstration: The dewatering technique was demonstrated for the construction press during construction of a floor slab for a warehouse in Bridgeport, Connecticut. Details of the process are presented. **2 pp; 81:503**

A Better Life for Bridge Decks? Field and laboratory investigations in Europe suggest that vacuum dewatered concrete has improved resistance to deicing salts and recurring cycles of freezing and thawing. **1 p; 81:507**

WATERPROOFING

Waterproofing: Who Needs It?: Roofs, walls and floors below grade, tunnels, water-holding structures and bridges require serious attention to design and construction of waterproof barrier systems. **2 pp; 81:305**

Dampproofing: Why, Where, and How?: Where there is no head of water pressure, dampproofing is adequate. Some methods are outlined for retarding absorption or transmission of water and water vapor, and a listing of various dampproofing coating materials for walls is provided. **2 pp; 81:309**

Waterproofing: Establishing a Barrier: When the movement of water under hydrostatic pressure must be prevented, a flawless barrier is required. Brief descriptions are provided of 19 materials (exclusive of joints, joint sealants and waterstops) best suited for barriers. **5 pp; 81:313**

Waterproofing Checklist: Important considerations for specifiers and contractors, based on data taken from ACI 515.1R-79. **1p; 81:321**

CORRECTIONS PUBLISHED DURING THE 1981 VOLUME YEAR:

Industrial Plants Beginning to Tilt Up All Over the Nation, January, page 54, bibliography should also have included the reference: "Bond Breakers and Their Effective Use, 5 pages, October 1977, page 547, CONCRETE CONSTRUCTION."

Long-strip Construction Preferred for Slab on Ground, September, page 745, fourth line from bottom of first column: ultimate shrinkage after one month should read "34 percent."